

WHAT'S MY LINE?

Construct a scatter plot. Draw a line of fit, then use two points on the line to find the equation of the line. (HINT: First write your equation in point-slope form, then change it to slope-intercept form.)

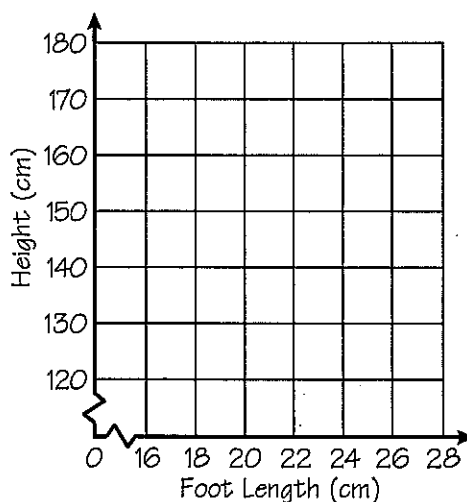
1. Foot Length and Height

Each of several students measured the length of his/her right foot and height.

Let x = foot length (cm)

y = height (cm)

x	y
24	159
22	148
19	126
23	157
20	138
24	162
28	180
25	161
17	122
24	155
26	173
22	146



two points: _____

equation: _____

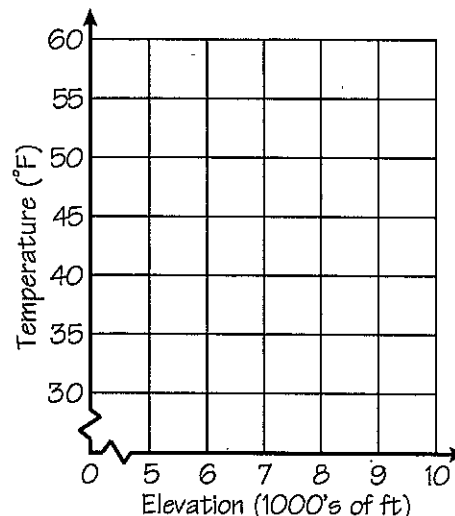
2. Elevation and Temperature

Temperatures were reported from various elevations on a mountain.

Let x = elevation (1000's of ft)

y = temperature ($^{\circ}$ F)

x	y
7.2	45
8.6	41
5.8	47
7.5	43
5.1	56
8.3	39
9.5	36
6.4	49
9.8	32
6.0	46
9.0	40
5.5	49



two points: _____

equation: _____

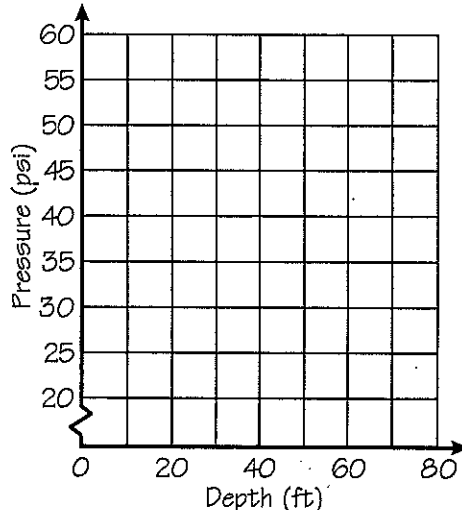
3. Depth and Pressure

Divers reported the pressure at various depths underwater.

Let x = depth (ft)

y = pressure (psi)

x	y
69	50
30	31
50	41
78	57
44	39
66	45
12	20
36	32
57	42
17	24
75	52
23	25



two points: _____

equation: _____

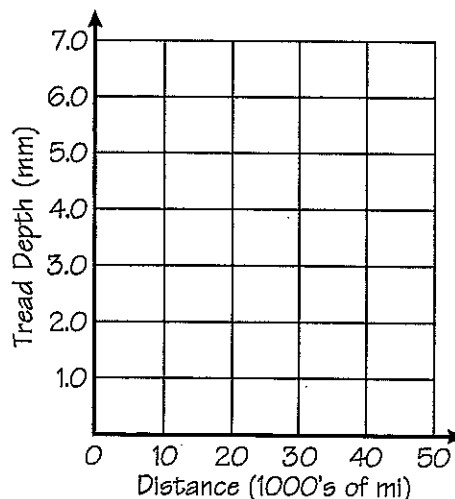
4. Mileage and Tread Depth

Tread depth of the XL tire was measured for different distances driven.

Let x = distance driven (1000's of mi)

y = tread depth (mm)

x	y
17	5.3
41	1.2
25	4.0
4	6.8
34	2.3
22	4.1
48	0.3
36	1.9
13	5.7
30	3.3
45	1.9
9	6.0



two points: _____

equation: _____

Why Doesn't Anybody Wear Paper Clothes?

Write and graph an equation that models the situation. Then answer the questions. Cross out the letters above each answer. Write the remaining letters in the spaces at the bottom.

Situation #1. Run some, walk some.

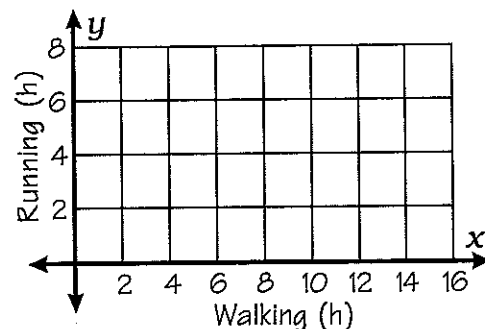
Trax enters an ultra-marathon race of 48 miles. His average walking speed is 3 mph, and his average running speed is 8 mph.

Let x = number of hours he walks

Let y = number of hours he runs

equation: _____

- How long will it take Trax to complete the race if he walks the entire 48 miles?
- How long will it take if he runs the entire 48 miles?
- If he walks for 4 hours, how long will he have to run?



Situation #2. Buy low, sell high.

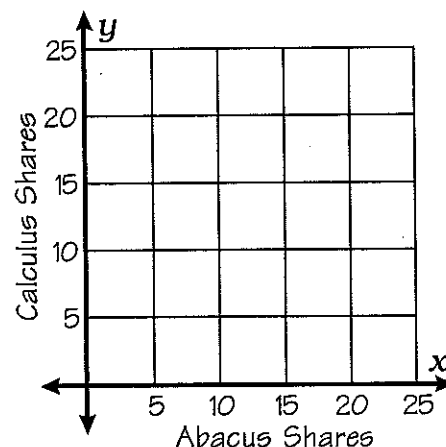
Mr. Mustard has \$1000 to invest in two stocks. Abacus stock costs \$40 per share, while Calculus stock costs \$50 per share.

Let x = number of shares of Abacus stock

Let y = number of shares of Calculus stock

equation: _____

- How many shares can Mr. Mustard buy if spends the entire \$1000 on Calculus stock?
- How many shares of Calculus stock can he buy if he buys 10 shares of Abacus stock?
- What is the slope of the graph of your equation?



Situation #3. Feel the burn.

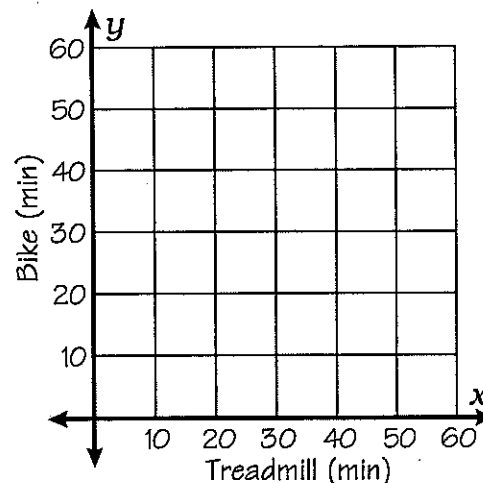
At the gym, Zeta can burn an average of 12 calories/min running on a treadmill, or she can burn an average of 9 calories/min riding a stationary bike. She would like to burn a total of 540 calories.

Let x = number of minutes on the treadmill

Let y = number of minutes on the bike

equation: _____

- If Zeta rides the bike for 20 minutes, how long will she need to run on the treadmill?
- If she runs on the treadmill for 20 minutes, how long will she need to ride the bike?
- What is the slope of the graph of your equation?



IT 20	TH $-\frac{5}{3}$	AT 30 min	DR 4.5 h	E 14	SS 12	YA 35 min	DA $-\frac{4}{3}$	RE 15 h
TE 18	F $33\frac{1}{3}$ min	AR 32 min	A $-\frac{3}{5}$	TR 16 h	BL 8 h	U $-\frac{4}{5}$	E 5.2 h	N 6 h